

(3) a fusion protein containing a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 or said fragment,
said method comprising:
providing the protein complex;
contacting said protein complex with a test compound; and
detecting the binding of said test compound to said protein complex.

Claim 163 (new) The method of Claim 162, further comprising a step of generating a data set defining one or more selected test compounds, said data set being embodied in a transmittable form.

Claim 164 (new) A method for selecting modulators of an interaction between a first protein and a second protein,

- (a) said first protein being selected from the group consisting of
 - (i) IKKB, IKKA, IKKG, OR IKK-I,
 - (ii) a IKKB, IKKA, IKKG, OR IKK-I homologue having an amino acid sequence at least 90% identical to that of IKKB, IKKA, IKKG, OR IKK-I and capable of interacting with a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730,
 - (iii) a IKKB, IKKA, IKKG, OR IKK-I fragment capable of interacting with a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730, and
 - (iv) a fusion protein containing IKKB, IKKA, IKKG, OR IKK-I, said IKKB, IKKA, IKKG, OR IKK-I homologue or said IKKB, IKKA, IKKG, OR IKK-I fragment;
- and
- (b) said second protein being selected from the group consisting of
 - (1) LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730,
 - (2) a homologue of a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730

having an amino acid sequence at least 90% identical to that of said protein and capable of interacting with IKKB, IKKA, IKKG, OR IKK-I,

(3) a fragment of a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 and capable of interacting with IKKB, IKKA, IKKG, OR IKK-I, and

(4) a fusion protein containing a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730, said protein homologue or said protein fragment, said method comprising: contacting said first protein with said second protein in the presence of a test compound; and

detecting the interaction between said first protein and said second protein.

Claim 165 (new) The method of Claim 164, wherein at least one of said first and second proteins is a fusion protein having a detectable tag.

Claim 166 (new) The method of Claim 164, wherein said contacting step is conducted in a substantially cell free environment.

Claim 167 (new) The method of Claim 164, wherein the interaction between said first protein and said second protein is determined in a host cell.

Claim 168 (new) The method of Claim 167, wherein said host cell is a yeast cell.

Claim 169 (new) The method of Claim 164, wherein said determining step comprises measuring the amount of the protein complex formed by said first and second proteins.

Claim 170 (new) The method of Claim 164, further comprising a step of generating a data set defining one or more selected test compounds, said data set being embodied in a transmittable form.

Claim 171 (new) A method for selecting modulators of an isolated protein complex comprising a first protein interacting with a second protein, wherein:

(a) said first protein is selected from the group consisting of

(i) IKKB, IKKA, IKKG, IKK-I,

(ii) a IKKB, IKKA, IKKG, IKK-I fragment capable of interacting with a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730, and

(iii) a fusion protein containing IKKB, IKKA, IKKG, IKK-I or said IKKB, IKKA, IKKG, IKK-I fragment; and

(b) said second protein is selected from the group consisting of

(1) a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730,

(2) a fragment of a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 and capable of interacting with IKKB, IKKA, IKKG, OR IKK-I, and

(3) a fusion protein containing a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 or said fragment,

said method comprising:

contacting said protein complex with a test compound; and

detecting the interaction between said first protein and said second protein.

Claim 172 (new) The method of Claim 171, further comprising a step of generating a data set defining one or more selected test compounds, said data set being embodied in a transmittable form.

Claim 173 (new) A method for selecting modulators of an interaction between a first polypeptide and a second polypeptide, said first polypeptide being IKKB, IKKA, IKKG, OR IKK-I or a homologue or fragment thereof and said second polypeptide being a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614,

SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 or a homologue or fragment thereof, said method comprising:

providing in a host cell a first fusion protein having said first polypeptide, and a second fusion protein having said second polypeptide, wherein a DNA binding domain is fused to one of said first and second polypeptides while a transcription-activating domain is fused to the other of said first and second polypeptides;

providing in said host cell a reporter gene, wherein the transcription of the reporter gene is controlled by the interaction between the first polypeptide and the second polypeptide; allowing said first and second fusion proteins to interact with each other within said host cell in the presence of a test compound; and

determining the expression of said reporter gene.

Claim 174 (new) The method of Claim 173, wherein said host cell is a yeast cell.

Claim 175 (new) A method for selecting compounds capable of interfering with the interaction between a first protein and a second protein, wherein

(a) said first protein is selected from the group consisting of

(i) IKKB, IKKA, IKKG, OR IKK-I,

(ii) a IKKB, IKKA, IKKG, OR IKK-I homologue having an amino acid sequence at least 90% identical to that of IKKB, IKKA, IKKG, OR IKK-I and capable of interacting with a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730,

(iii) a IKKB, IKKA, IKKG, OR IKK-I fragment capable of interacting with a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730, and

(iv) a fusion protein containing IKKB, IKKA, IKKG, OR IKK-I, said IKKB, IKKA, IKKG, OR IKK-I homologue or said IKKB, IKKA, IKKG, OR IKK-I fragment; and

(b) said second protein is selected from the group consisting of

(1) LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730,

(2) a homologue of a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 having an amino acid sequence at least 90% identical to that of said protein and capable of interacting with IKKB, IKKA, IKKG, OR IKK-I,

(3) a fragment of a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 capable of interacting with IKKB, IKKA, IKKG, OR IKK-I, and

(4) a fusion protein containing a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730, said protein homologue or said protein fragment, said method comprising: contacting said first protein with said second protein in the presence of a test compound and detecting the interaction between said first protein and said second protein; and contacting said first protein with said second protein in the absence of said test compound and detecting the interaction between said first protein and said second protein.

Claim 176 (new) The method of Claim 175, wherein said contacting steps are conducted in a substantially cell free environment.

Claim 177 (new) The method of Claim 175, wherein said contacting steps are conducted in a host cell.

Claim 178 (new) The method of Claim 175, wherein the first protein is a fusion protein containing IKKB, IKKA, IKKG, OR IKK-I or said IKKB, IKKA, IKKG, OR IKK-I fragment, and said second protein is a fusion protein containing a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 or said protein fragment.

Claim 179 (new) The method of Claim 175, further comprising a step of generating a data set defining one or more selected test compounds, said data set being embodied in a transmittable form.

Claim 180 (new) A method for providing modulators of a protein-protein interaction of an isolated protein complex comprising a first protein interacting with a second protein, wherein:

(a) said first protein is selected from the group consisting of

(i) IKKB, IKKA, IKKG, IKK-I,

(ii) a IKKB, IKKA, IKKG, IKK-I fragment capable of interacting with a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730, and

(iii) a fusion protein containing IKKB, IKKA, IKKG, IKK-I or said IKKB, IKKA, IKKG, IKK-I fragment; and

(b) said second protein is selected from the group consisting of

(1) a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730,

(2) a fragment of a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 and capable of interacting with IKKB, IKKA, IKKG, OR IKK-I, and

(3) a fusion protein containing a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 or said fragment,

said method comprising:

providing atomic coordinates defining a three-dimensional structure of the protein complex; and

designing or selecting compounds capable of modulating the interaction between the first and second proteins based on said atomic coordinates.

Claim 181 (new) The method of Claim 180, further comprising a step of generating a data set defining one or more selected test compounds, said data set being embodied in a transmittable form.

Claim 182 (new) A method for providing antagonists of a protein-protein interaction of an isolated protein complex comprising a first protein interacting with a second protein, wherein:

(a) said first protein is selected from the group consisting of

(i) IKKB, IKKA, IKKG, IKK-I,

(ii) a IKKB, IKKA, IKKG, IKK-I fragment capable of interacting with a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730, and

(iii) a fusion protein containing IKKB, IKKA, IKKG, IKK-I or said IKKB, IKKA, IKKG, IKK-I fragment; and

(b) said second protein is selected from the group consisting of

(1) a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730,

(2) a fragment of a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 and capable of interacting with IKKB, IKKA, IKKG, OR IKK-I, and

(3) a fusion protein containing a protein selected from the group consisting of LDHM, EIF3S10, SLAP2, KIAA0614, SART1, GBDR1, TRAF, N UMA1, SPA-1, PN13730 or said fragment;

said method comprising:

providing atomic coordinates defining a three-dimensional structure of the protein complex; and

designing or selecting compounds capable of interfering with the interaction between the first and second proteins based on said atomic coordinates.